



1

SEQUENCE LISTING

<110> Polyak, Kornelia  
Porter, Dale  
Sgroi, Dennis  
Krop, Ian

<120> HIN-1, A TUMOR SUPPRESSOR GENE

<130> 00530-094001

<140> US 10/081,817

<141> 2002-02-22

<150> US 60/270,973

<151> 2001-02-23

<150> US 60/351,908

<151> 2002-01-25

<160> 32

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 104

<212> PRT

<213> Homo sapiens

<400> 1

Met Lys Leu Ala Ala Leu Leu Gly Leu Cys Val Ala Leu Ser Cys Ser  
1 5 10 15  
Ser Ala Arg Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala Gln Pro  
20 25 30  
Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly Thr Leu Ala  
35 40 45  
Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu Leu Ser Ser Leu  
50 55 60  
Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser Gln Lys Cys Val Ala  
65 70 75 80  
Glu Leu Gly Pro Gln Ala Val Gly Ala Val Lys Ala Leu Lys Ala Leu  
85 90 95  
Leu Gly Ala Leu Thr Val Phe Gly  
100

<210> 2

<211> 86

<212> PRT

<213> Homo sapiens

<400> 2

Arg Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala Gln Pro Val Ala  
1 5 10 15  
Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly Thr Leu Ala Asn Pro  
20 25 30  
Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu Leu Ser Ser Leu Gly Ile

RECEIVED

SEP 04 2003

TECH CENTER 1600/2900

35                      40                      45  
 Pro Val Asn His Leu Ile Glu Gly Ser Gln Lys Cys Val Ala Glu Leu  
 50                      55                      60  
 Gly Pro Gln Ala Val Gly Ala Val Lys Ala Leu Lys Ala Leu Leu Gly  
 65                      70                      75                      80  
 Ala Leu Thr Val Phe Gly  
 85

<210> 3  
 <211> 312  
 <212> DNA  
 <213> Homo sapiens

<400> 3  
 atgaagctcg ccgccctcct ggggctctgc gtggccctgt cctgcagctc cgctcgtgct 60  
 ttcttagtgg gctcggccaa gcctgtggcc cagcctgtcg ctgcgctgga gtcggcgggcg 120  
 gaggccgggg ccgggaccct ggccaacccc ctcggcaccc tcaaccgct gaagctcctg 180  
 ctgagcagcc tgggcatccc cgtgaaccac ctcatagagg gctcccagaa gtgtgtggct 240  
 gagctgggtc ccagggccgt gggggccgtg aaggccctga aggcctgct gggggccctg 300  
 acagtgttg gc 312

<210> 4  
 <211> 258  
 <212> DNA  
 <213> Homo sapiens

<400> 4  
 cgtgctttct tagtgggctc ggccaagcct gtggcccagc ctgtcgctgc gctggagtcg 60  
 gcggcgagg ccggggccgg gaccctggcc aaccctctcg gcaccctcaa cccgctgaag 120  
 ctctgctga gcagcctggg catccccgtg aaccacctca tagagggctc ccagaagtgt 180  
 gtggctgagc tgggtcccca ggccgtgggg gccgtgaagg ccctgaaggc cctgctgggg 240  
 gccctgacag tgtttggc 258

<210> 5  
 <211> 104  
 <212> PRT  
 <213> Mus musculus

<400> 5  
 Met Lys Leu Thr Thr Thr Phe Leu Val Leu Cys Val Ala Leu Leu Ser  
 1                      5                      10                      15  
 Asp Ser Gly Val Ala Phe Phe Met Asp Ser Leu Ala Lys Pro Ala Val  
 20                      25                      30  
 Glu Pro Val Ala Ala Leu Ala Pro Ala Ala Glu Ala Val Ala Gly Ala  
 35                      40                      45  
 Val Pro Ser Leu Pro Leu Ser His Leu Ala Ile Leu Arg Phe Ile Leu  
 50                      55                      60  
 Ala Ser Met Gly Ile Pro Leu Asp Pro Leu Ile Glu Gly Ser Arg Lys  
 65                      70                      75                      80  
 Cys Val Thr Glu Leu Gly Pro Glu Ala Val Gly Ala Val Lys Ser Leu  
 85                      90                      95  
 Leu Gly Val Leu Thr Met Phe Gly  
 100

<210> 6  
 <211> 85  
 <212> PRT

<213> Mus musculus

<400> 6

Val	Ala	Phe	Phe	Met	Asp	Ser	Leu	Ala	Lys	Pro	Ala	Val	Glu	Pro	Val
1				5					10					15	
Ala	Ala	Leu	Ala	Pro	Ala	Ala	Glu	Ala	Val	Ala	Gly	Ala	Val	Pro	Ser
		20					25					30			
Leu	Pro	Leu	Ser	His	Leu	Ala	Ile	Leu	Arg	Phe	Ile	Leu	Ala	Ser	Met
		35				40					45				
Gly	Ile	Pro	Leu	Asp	Pro	Leu	Ile	Glu	Gly	Ser	Arg	Lys	Cys	Val	Thr
	50				55					60					
Glu	Leu	Gly	Pro	Glu	Ala	Val	Gly	Ala	Val	Lys	Ser	Leu	Leu	Gly	Val
65				70					75					80	
Leu	Thr	Met	Phe	Gly											
				85											

<210> 7

<211> 312

<212> DNA

<213> Mus musculus

<400> 7

atgaagctta	ccaccacctt	tctagtgtc	tgtgtggctc	tgctcagtga	ctctgggtgtt	60
gctttcttca	tggactcatt	ggccaagcct	gcggtagaac	ccgtggccgc	ccttgctcca	120
gctgcagagg	ctgtggcagg	ggctgtgcct	agcctaccat	taagccactt	ggccatcctg	180
aggttcatcc	tggccagcat	gggcatccca	ttggatcctc	tcatagaggg	atccaggaag	240
tgtgtcaccg	agctgggccc	tgaggctgta	ggagctgtga	agtcactgct	gggggtcctg	300
acaatgttcg	gt					312

<210> 8

<211> 255

<212> DNA

<213> Mus musculus

<400> 8

gttgctttct	tcatggactc	attggccaag	cctgcggtag	aaccctgggc	cgcccttget	60
ccagctgcag	aggctgtggc	aggggctgtg	cctagcctac	cattaagcca	cttggccatc	120
ctgaggttca	tcttggccag	catgggcatc	ccattggatc	ctctcataga	gggatccagg	180
aagtgtgtca	ccgagctggg	ccctgaggct	gtaggagctg	tgaagtcact	gctgggggtc	240
ctgacaatgt	tcggt					255

<210> 9

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 9

gagggaaagt	tttttttatt	tgg	23
------------	------------	-----	----

<210> 10

<211> 22

<212> DNA

<213> Artificial Sequence

<220>  
<223> primer

<400> 10  
caaaactaac aaaacaaaac ca 22

<210> 11  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer

<400> 11  
gttaagagga agttttcgag gttc 24

<210> 12  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer

<400> 12  
ggtacggggtt ttttacggtt cgtc 24

<210> 13  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer

<400> 13  
aacttcttat acccgatcct cg 22

<210> 14  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer

<400> 14  
gttaagagga agtttttgag gttt 24

<210> 15  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> primer

<400> 15  
 ggatatgggtt ttttatgggtt tggt 24  
  
 <210> 16  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> primer  
  
 <400> 16  
 caaaacttct tatacccaat cctca 25  
  
 <210> 17  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> primer  
  
 <400> 17  
 tttccctgct tccacactag c 21  
  
 <210> 18  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> primer  
  
 <400> 18  
 agattaagaa ggaattgacc t 21  
  
 <210> 19  
 <211> 551  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <221> misc\_feature  
 <222> 189  
 <223> n = C or G  
  
 <400> 19  
 cgcccgggga ggccggccggg agtgaggcct gatcgctccct ggccgctcca cctccccagg 60  
 cgcagaaggc gcccacgagg acccccagtg cccgacgttg ccacgggtctg ggatcagagg 120  
 cagggaccag ggagccagga actgcgccgc ccccgcccct gccctggcgc gagggaagct 180  
 ccctcaccng agggaagctc ccctcaccgc gcccgcccct gcaggggggc gcgtggggtc 240  
 agaccgcaaa gcgaaggtgc gggccggggg gggcctcgcg gagacaaagg ccgggcctgc 300  
 ctctctcaga gggccccagc gcctgccaaag aggaagtcct cgaggcccgc gcaggggaagg 360  
 gggcacgggc ttcccagggc ccgccggccg cagcaggaag ttggccaggg cacggccgtg 420  
 agcggagcgg gcagggcttt ctcaggagcg cgggcgaggc cggcgctgga ggggcgagga 480  
 ccgggtataa gaagcctcgt ggccttgccc gggcagccgc aggttccccg cgcccccca 540

gccccgcgc c

551

<210> 20

<211> 279

<212> DNA

<213> Rattus norvegicus

<400> 20

gttctctgtt	ttgtgttggt	aggcgttget	ttcttggtgg	attcactggc	caagcctgtg	60
gtagaacccg	tggtgccat	tgctacagct	gcagaggctg	tggcaggggc	tgtgcctagc	120
ctaccattaa	gccacttggc	catcctgagg	ttcatcgtga	ccagcctggg	catcccattg	180
gacctctca	tagatggttc	caggaagtgc	gtcaccgagc	tgggccctga	ggctgtagga	240
gctgtgaagt	cactgctggg	ggccctgaca	acgttcggt			279

<210> 21

<211> 93

<212> PRT

<213> Rattus norvegicus

<400> 21

Val	Leu	Cys	Phe	Val	Leu	Val	Gly	Val	Ala	Phe	Leu	Val	Asp	Ser	Leu
1				5					10					15	
Ala	Lys	Pro	Val	Val	Glu	Pro	Val	Ala	Ala	Ile	Ala	Thr	Ala	Ala	Glu
			20					25					30		
Ala	Val	Ala	Gly	Ala	Val	Pro	Ser	Leu	Pro	Leu	Ser	His	Leu	Ala	Ile
			35					40					45		
Leu	Arg	Phe	Ile	Val	Thr	Ser	Leu	Gly	Ile	Pro	Leu	Asp	Pro	Leu	Ile
			50				55					60			
Asp	Gly	Ser	Arg	Lys	Cys	Val	Thr	Glu	Leu	Gly	Pro	Glu	Ala	Val	Gly
65					70					75				80	
Ala	Val	Lys	Ser	Leu	Leu	Gly	Ala	Leu	Thr	Thr	Phe	Gly			
				85					90						

<210> 22

<211> 84

<212> PRT

<213> Homo sapiens

<400> 22

Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala	Gln	Pro	Val	Ala	Ala	Leu
1				5					10					15	
Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly	Thr	Leu	Ala	Asn	Pro	Leu	Gly
			20					25					30		
Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	
			35				40					45			
Asn	His	Leu	Ile	Glu	Gly	Ser	Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro
			50				55				60				
Gln	Ala	Val	Gly	Ala	Val	Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu
65					70					75				80	
Thr	Val	Phe	Gly												

<210> 23

<211> 252

<212> DNA

<213> Homo sapiens

<400> 23  
 ttcttagtgg gctcggccaa gcctgtggcc cagcctgtcg ctgcgctgga gtcggcggcg 60  
 gaggcgggg cggggaccct ggccaacccc ctccggcacc tcaaccgct gaagctcctg 120  
 ctgagcagcc tgggcatccc cgtgaaccac ctcatagagg gctcccagaa gtgtgtggct 180  
 gagctgggtc cccaggccgt gggggccgtg aaggccctga aggcctgct gggggccctg 240  
 acagtgtttg gc 252

<210> 24  
 <211> 83  
 <212> PRT  
 <213> Mus musculus

<400> 24  
 Phe Phe Met Asp Ser Leu Ala Lys Pro Ala Val Glu Pro Val Ala Ala  
 1 5 10 15  
 Leu Ala Pro Ala Ala Glu Ala Val Ala Gly Ala Val Pro Ser Leu Pro  
 20 25 30  
 Leu Ser His Leu Ala Ile Leu Arg Phe Ile Leu Ala Ser Met Gly Ile  
 35 40 45  
 Pro Leu Asp Pro Leu Ile Glu Gly Ser Arg Lys Cys Val Thr Glu Leu  
 50 55 60  
 Gly Pro Glu Ala Val Gly Ala Val Lys Ser Leu Leu Gly Val Leu Thr  
 65 70 75 80  
 Met Phe Gly

<210> 25  
 <211> 249  
 <212> DNA  
 <213> Mus musculus

<400> 25  
 ttcttcattgg actcattggc caagcctgcg gtagaaccgg tggccgccct tgctccagct 60  
 gcagaggctg tggcaggggc tgtgcctagc ctaccattaa gccacttggc catcctgagg 120  
 ttcatcctgg ccagcatggg catccattg gatcctctca tagagggatc caggaagtgt 180  
 gtcaccgagc tgggcccctga ggctgtagga gctgtgaagt cactgctggg ggtcctgaca 240  
 atgttcggt 249

<210> 26  
 <211> 249  
 <212> DNA  
 <213> Rattus norvegicus

<400> 26  
 ttcttggtgg attcactggc caagcctgtg gtagaaccgg tggctgccat tgctacagct 60  
 gcagaggctg tggcaggggc tgtgcctagc ctaccattaa gccacttggc catcctgagg 120  
 ttcatcgtga ccagcctggg catccattg gatcctctca tagatgggtc caggaagtgc 180  
 gtcaccgagc tgggcccctga ggctgtagga gctgtgaagt cactgctggg ggccctgaca 240  
 acgttcggt 249

<210> 27  
 <211> 83  
 <212> PRT  
 <213> Rattus norvegicus

<400> 27  
 Phe Leu Val Asp Ser Leu Ala Lys Pro Val Val Glu Pro Val Ala Ala

```

      1           5           10           15
Ile Ala Thr Ala Ala Glu Ala Val Ala Gly Ala Val Pro Ser Leu Pro
      20           25           30
Leu Ser His Leu Ala Ile Leu Arg Phe Ile Val Thr Ser Leu Gly Ile
      35           40           45
Pro Leu Asp Pro Leu Ile Asp Gly Ser Arg Lys Cys Val Thr Glu Leu
      50           55           60
Gly Pro Glu Ala Val Gly Ala Val Lys Ser Leu Leu Gly Ala Leu Thr
      65           70           75           80
Thr Phe Gly

```

<210> 28  
 <211> 109  
 <212> PRT  
 <213> Drosophila melanogaster

```

<400> 28
Met Phe Lys Leu Ser Ala Leu Val Val Leu Cys Ala Leu Val Ala Cys
  1           5           10           15
Ser Ser Ala Glu Pro Lys Pro Ala Ile Leu Ala Ala Ala Pro Val Val
      20           25           30
Ala Ala Ala Pro Ala Gly Val Val Thr Ala Thr Ser Ser Gln Tyr Val
      35           40           45
Ala Arg Asn Phe Asn Gly Val Ala Ala Ala Pro Val Val Ala Ala Ala
      50           55           60
Tyr Thr Ala Pro Val Ala Ala Ala Tyr Thr Ala Pro Val Ala Ala
      65           70           75           80
Ala Ala Tyr Thr Ala Pro Val Ala Ala Tyr Ser Ala Tyr Pro Tyr
      85           90           95
Ala Ala Tyr Pro Tyr Ser Ala Ala Tyr Thr Thr Val Leu
      100          105

```

<210> 29  
 <211> 327  
 <212> DNA  
 <213> Drosophila melanogaster

```

<400> 29
atgttcaagc tgtctgccct cgttgtcctg tgcgctctgg tggcctgctc ctcggtgag      60
cccaagcccg ctatcctggc cgccgctcca gtggttgag ctgctcctgc cggcgtgggc      120
accgctacca gttegcagta cgtggccgcg aacttcaacg gtgtggctgc tgctccagtt      180
gttgccgctg cctacaccgc tccagttgcc gccgctgcct ataccgctcc agttgccgcc      240
gctgcttata ccgctccagt tgccgctgcc tactctgctt atccgtatgc cgcctaccct      300
tacagcgctg catacaccac tgttttg      327

```

<210> 30  
 <211> 137  
 <212> PRT  
 <213> Drosophila melanogaster

```

<400> 30
Met Lys Phe Leu Ala Val Cys Phe Phe Ala Val Val Ala Val Ala Ala
  1           5           10           15
Ala Lys Pro Gly Ile Val Ala Pro Leu Ala Tyr Thr Ala Pro Ala Val
      20           25           30
Val Gly Ser Ala Ala Tyr Val Ala Pro Tyr Ala Ser Ser Tyr Thr Ala

```

```

      35              40              45
Asn Ser Val Ala His Ser Ala Ala Phe Pro Ala Ala Tyr Thr Ala Ala
      50              55              60
Tyr Thr Ala Pro Val Ala Ala Ala Tyr Thr Ala Pro Val Ala Ala Ala
65              70              75              80
Tyr Thr Ala Pro Val Ala Ala Ala Tyr Ala Ala Pro Ala Ala Tyr Thr
      85              90              95
Ala Ala Tyr Thr Ala Pro Ile Ala Arg Tyr Ala Ala Thr Pro Phe Ala
      100             105             110
Ala Pro Ile Ala Ala Pro Val Ala Ala Ala Tyr Thr Ala Pro Ile Ala
      115             120             125
Ala Ala Ala Pro Val Leu Leu Lys Lys
      130             135

```

```

<210> 31
<211> 411
<212> DNA
<213> Drosophila melanogaster

```

```

<400> 31
atgaaattcc tcgccgtctg cttcttcgct gttgtggctg tggctgctgc caaaccgggt      60
attgtggctc ctctggccta caccgctccg gctgtgggtg gcagtgccgc ctacgtggct      120
ccctacgcct ccagctacac cgccaactcg gtggcccaca gcgccgcctt cccagctgcc      180
tacaccgccg cctacactgc tcccgttgct gctgcctata ccgctccagt ggctgctgct      240
tataccgctc cagtggccgc tgcgtacgcc gcccagctg cctataccgc tgcctacacc      300
gccccattg cccgttatgc cgccaccccc ttgcgagcac ccacgcccgc tcccgtggct      360
gccgcctaca ccgcccccat cgccgccgct gcccagttc tgctgaagaa g      411

```

```

<210> 32
<211> 93
<212> PRT
<213> Homo sapiens

```

```

<400> 32
Met Lys Leu Val Thr Ile Phe Leu Leu Val Thr Ile Ser Leu Cys Ser
  1              5              10             15
Tyr Ser Ala Thr Ala Phe Leu Ile Asn Lys Val Pro Leu Pro Val Asp
      20              25              30
Lys Leu Ala Pro Leu Pro Leu Asp Asn Ile Leu Pro Phe Met Asp Pro
      35              40              45
Leu Lys Leu Leu Leu Lys Thr Leu Gly Ile Ser Val Glu His Leu Val
      50              55              60
Glu Gly Leu Arg Lys Cys Val Asn Glu Leu Gly Pro Glu Ala Ser Glu
65              70              75              80
Ala Val Lys Lys Leu Leu Glu Ala Leu Ser His Leu Val
      85              90

```